



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/553,252

09/22/2006

Vincent Mathevon

12400-046

1794

757 7590 01/07/2010  
BRINKS HOFER GILSON & LIONE  
P.O. BOX 10395  
CHICAGO, IL 60610

EXAMINER

HOLWERDA, STEPHEN

ART UNIT

PAPER NUMBER

3664

MAIL DATE

DELIVERY MODE

01/07/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/553,252	<b>Applicant(s)</b> MATHEVON ET AL.	
	<b>Examiner</b> STEPHEN HOLWERDA	<b>Art Unit</b> 3664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 October 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/07/2005, 02/21/2006, 02/29/2008</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This communication is a First Office Action on the Merits. Claims 1-23 as originally filed are pending and have been considered as follows.

#### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character not mentioned in the description: “25” in Fig. 1. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Specification***

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract

Art Unit: 3664

on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because: (1) the abstract contains the legal phraseology "comprises"; and (2) the abstract begins with the phrase "the invention relates to". Correction is required. See MPEP § 608.01(b).

### ***Claim Objections***

4. Claim 1 is objected to because of the following informalities: "a pedestrian" in line 11 appears to refer back to "a pedestrian" in line 6. Amendment to "the pedestrian" in line 11 is respectfully suggested. Appropriate correction is required.

5. Claim 9 is objected to because of the following informalities: "the windscreen" in lines 2-3 appears to refer back to "a windshield" in line 3 of Claim 1. Amendment to "the windshield" in Claim 9 is respectfully suggested. Appropriate correction is required.

6. Claims 17-21 are objected to because of the following informalities: "the pedestrian arrangement" in line 2 of Claim 17, "the pedestrian protection arrangement" in line 2 of Claim 18, lines 1-2 of Claim 20, and line 2 of Claim 21 and "the pedestrian protection arrangement system" in line 1-2 of Claim 19 are inconsistent with "a pedestrian arrangement device" in line 3 of Claim 11. Appropriate correction is required.

Art Unit: 3664

7. Claim 21 is objected to because of the following informalities: "the hood or bonnet" appears to refer back to "a hood" in Claim 1. Amendment to "the hood" is respectfully suggested. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the phrase "which may include" in line 6 renders the claim indefinite because it is unclear whether the limitations "a pedestrian located in front of the vehicle" following "which may include" are intended to be part of the claimed invention. See MPEP § 2173.05(d). Claims 2-23 dependent on Claim 1 are therefore rejected.

Regarding Claim 11, "a threshold" appears twice in line 5. It is unclear whether these are intended to be the same threshold value. If a threshold relating to distance and a distinct threshold relating to speed are intended, amendment to "a threshold distance" and "a threshold speed" is respectfully suggested. Clarification is required. Claims 12 and 17-23 dependent on Claim 11 is therefore rejected.

Art Unit: 3664

Regarding Claim 12, "the threshold distance" in line 1 lacks proper antecedent basis. The previously suggested amendments in Claim 11 would clarify the term. Clarification is required.

Regarding Claim 15, "the sensor" in line 2 lacks clear antecedent basis given "a first sensor arrangement" in lines 3-4 of Claim 1 and "a second sensor arrangement" in line 9 of Claim 1. Clarification is required.

Regarding Claim 17, the intended antecedent relationship, if any, between "a threshold" in lines 3-4 and line 4 in Claim 17 and "a threshold" in line 5 of Claim 11 is unclear. Clarification is required.

Regarding Claim 20, "one mode of activation" in line 3-4 and "a second mode of operation" in line 4-5 lack a clear antecedent relationship to "at least two modes of operation" in line 2-3 of Claim 18. If antecedent basis is intended, amendment in Claim 18 to "a first and a second mode of activation" and in Claim 20 to "the first mode of activation" and "the second mode of activation" is respectfully suggested. Clarification is required.

Regarding Claim 21, "one mode of activation" in line 5 and "the second mode" in line 6 lack a clear antecedent relationship to "at least two modes of operation" in line 2-3 of Claim 18. If antecedent basis is intended, amendment in Claim 18 to "a first and second mode of activation" and in Claim 21 to "the first mode of activation" and "the second mode of activation" is respectfully suggested. Clarification is required.

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1-14 and 16-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Takahashi et al. (US Pub No. 2004/0182629).

As per Claim 1, Takahashi discloses a pedestrian detection system for a motor vehicle, having a hood (11) generally extending from the front of the vehicle (1) to a windshield (12) of the vehicle (1) (Fig. 1; paragraph 0028), the detection system comprising:

a first sensor arrangement (32) located more than 0.5 metres behind the front end of the vehicle (1) (Figs. 7; paragraph 0075-0078) to detect at least one of the speed and the distance to a part of an object which may include a pedestrian (H) located in front of the vehicle (1) (Figs. 7-8; paragraph 0083-0086, 0102),

the part of the object (H) extending above a predetermined height, the predetermined height being at least the height of the a front edge of the hood (11) (Figs. 8-9, paragraph 0091-0092, 0098); and

Art Unit: 3664

a second sensor (33) arrangement mounted at the front of the vehicle (1) responsive to an impact of the vehicle (1) with a pedestrian (H) (Fig. 7; paragraph 0079).

As per Claim 2, Takahashi further discloses wherein the first sensor arrangement (32) is a microwave radar sensor (Fig. 7; paragraph 0030, 0080, 0102).

As per Claim 3, Takahashi further discloses wherein the first sensor arrangement (32) is an infra-red radar sensor (Fig. 7; paragraph 0030, 0080, 0102).

As per Claim 4, Takahashi further discloses wherein the first sensor arrangement (32, 31) is a camera (Fig. 7; paragraph 0077-0080).

As per Claim 5, Takahashi further discloses wherein the camera operates in the visible spectrum (paragraph 0078-0080).

As per Claim 6, Takahashi further discloses wherein the camera operates in the infra-red spectrum (paragraph 0080).

As per Claim 7, Takahashi further discloses wherein the first sensor arrangement (32) is a stereo-camera arrangement (Fig. 7; paragraph 0077-0080).



As per Claim 8, Takahashi further discloses wherein the first sensor arrangement (32, 31) is mounted on the exterior of the vehicle (1) in front of the windshield (11) provided on the vehicle (Fig. 7).

As per Claim 9, Takahashi further discloses wherein the first sensor arrangement (32, 8) is mounted on the vehicle behind the windscreen (12) (Figs. 4-5).

As per Claim 10, Takahashi further discloses wherein the first sensor arrangement (32) is mounted above the windshield (Fig. 7).

As per Claim 11, Takahashi further discloses wherein the detection system being configured to activate a pedestrian arrangement device (22) in response to the first sensor arrangement (32) detecting at least one of the distance below a threshold and a speed above a threshold (Fig. 8; paragraph 0086, 0099).

As per Claim 12, Takahashi further discloses wherein the threshold distance is less than the distance between the first sensor arrangement (32) and the front of the vehicle (1) (Fig. 8; paragraph 0099).

As per Claim 13, Takahashi further discloses wherein the second sensor arrangement (33, 10) includes an accelerometer (Fig. 8; paragraph 0085, 0093).

Art Unit: 3664

As per Claim 14, Takahashi further discloses wherein the accelerometer is configured to provide a signal indicative of a crash situation and wherein, upon receipt of said the signal, an internal safety device (21) on the vehicle (1) is actuated (Fig. 8-9; paragraph 0099-0101).

As per Claim 16, Takahashi further discloses wherein the second sensor arrangement (33) is a sensor that can discriminate objects lighter than a pedestrian (paragraph 0098).

As per Claim 17, Takahashi further discloses wherein the pedestrian arrangement (22) is activated only if the first sensor arrangement (32) detects at least one of a distance to the object below a threshold and a speed above a threshold, and also in the event the second sensor arrangement (33) detects an object (paragraph 0097-0101).

### ***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3664

13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

15. Claims 15 and 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al. (US Pub No. 2004/0182629) in view of Myrholt et al. (US Patent No. 6,415,883).

As per Claim 15, Takahashi discloses all the limitations of Claim 1. Takahashi fails to expressly disclose wherein the sensor (33) mounted at the front of the vehicle (1) is a contact sensor.

Myrholt discloses a system for adjusting the hood (36) of a vehicle (10) in response to a collision signal (Figs. 4-5; column 4, line 15-45). The collision signal is

Art Unit: 3664

generated by an impact sensor (30) (Fig. 4; column 3, line 19-29). Like Takahashi, Myerholt is concerned with adjusting a vehicle to improve the safety of pedestrians in the event of a collision.

Therefore, one of ordinary skill would have found it obvious to apply the contact sensor of Myerholt to the system of Takahashi since doing so permit the system of Takahashi to operate with an additional class of sensors.

As per Claim 18, Takahashi discloses all the limitations of Claim 11. Takahashi fails to expressly disclose wherein the pedestrian protection arrangement (22) has at least two modes of activation.

Myerholt discloses a system for adjusting a vehicle (1) in response to a collision signal (Figs. 4-5; column 4, line 15-45). The system features a deployable hood (36) and deployable A-pillar covers (22) actuate in response to an anticipated collision (Fig. 4; column 4, line 15-45). The hood (36) and A-pillar covers (22) may actuate independently (column 4, line 15-45).

Therefore, one of ordinary skill in the art would have found it obvious to apply the multiple modes of activation of Myerholt to the system of Takahashi since doing so would provide additional protection to pedestrians.

As per Claim 19, the combination of Takahashi and Myerholt disclose all the limitations of Claim 18. Takahashi further discloses wherein the pedestrian protection

Art Unit: 3664

arrangement system incorporates at least two pedestrian protection devices (22, 11) (paragraph 0071).

As per Claim 20, the combination of Takahashi and Myrholt disclose all the limitations of Claim 18. Takahashi further discloses wherein the pedestrian protection arrangement incorporates a first lifter to lift a front part of the hood (Fig. 2) and a second lifter to lift a rear part of the hood (Fig. 3), one mode of activation being the lifting of the front part of the hood (paragraph 0036) and a second mode of operation including additionally the lifting of a rear part of the hood (paragraph 0038).

As per Claim 21, the combination of Takahashi and Myrholt disclose all the limitations of Claim 18. Takahashi further discloses wherein the pedestrian protection arrangement includes a mechanism (22) to lift the rear part of the hood or bonnet (11) (Fig. 7; paragraph 0100) and at least one air-bag (21) to cover part of the windshield (12) or a portion of an A-Pillar provided on the vehicle (1) (Figs. 6A-6C; paragraph 0063), one mode of activation comprising the lifting of only the rear part of the hood (11), the second mode including additionally the activation of at least one of the air-bags (21) (Figs. 6A-6C; paragraph 0063).

As per Claim 22, the combination of Takahashi and Myrholt disclose all the limitations of Claim 18. Takahashi further discloses wherein different modes are

Art Unit: 3664

activated in response to a signal dependent on the first sensor arrangement (32) reaching different thresholds (paragraph 0099).

As per Claim 23, the combination of Takahashi and Myrholt disclose all the limitations of Claim 22. Takahashi further discloses wherein at least one of the different thresholds is dependent upon the speed of the vehicle as measured by a third sensor arrangement (10) (Figs. 8-9; paragraph 0092).

### ***Conclusion***

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lucchini et al. (US Patent No. 4,249,632) and Kinoshita et al. (US Patent No. 6,114,951) disclose pedestrian safety systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEPHEN HOLWERDA whose telephone number is (571) 270-5747. The examiner can normally be reached on M-F 7:30-5:00; alternate F off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Khoi Tran can be reached on (571) 272-6919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Art Unit: 3664

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/sh/

Examiner

Art Unit 3664

/KHOI TRAN/

Supervisory Patent Examiner, Art Unit 3664